Maintaining heart health

The burden of cardiovascular disease

Cardiovascular disease (CVD), which includes coronary heart disease (CHD), heart failure and stroke, affects the lives of millions of people and is one of the largest causes of death and disability. An estimated 17.3 million people worldwide die of CVD every year[1]. Even though huge improvements have been made over the last 50 years in the prevention of CVD and CVD-related mortality rates are declining (the last decade has seen a 40% reduction in deaths amongst those under 75 years of age), it still accounts for over 30% of all deaths in the UK[2]. Importantly, many of these deaths are preventable and it is estimated that over 95% of people in the UK would benefit from some form of primary prevention[3]. Simple treatments and lifestyle changes can reduce the risk of developing CVD, even amongst those considered as being at high risk. In fact, an estimated 44% of the decrease in heart disease deaths from 1980-2000 was attributable to prevention through the reduction of risk factors[4].

The risk factors for cardiovascular disease

There are many risk factors that contribute to the development of CVD. Some are non-modifiable risk factors, for example, age, gender and family history, but the majority are risk factors related to behaviour and lifestyle, such as poor diet, smoking and lack of physical activity, which can be controlled, treated or modified. These lifestyle behaviours can lead to obesity, type 2 diabetes, high blood pressure and high cholesterol levels, all of which increase the risk of CVD. For those who are at high risk, for example people with a non-modifiable risk such as family history of heart disease, control of risk factors is especially important as these interact with each other and their effect is cumulative. In addition, the more risk factors a person is exposed to, the higher the chance of developing CVD. Eating a balanced diet and maintaining a healthy weight, being physically active, not smoking, not drinking alcohol excessively and controlling blood sugar, blood pressure and cholesterol, can all help to reduce the risk of CVD. Furthermore, research has demonstrated that adopting preventive strategies may add 10 years of life[5].

Prevention and risk management

A focus on the prevention of CVD should be everyone's priority as part of an integrated and co-ordinated approach to public health. This means that there needs to be effective communication and collaboration between all aspects of health policy, health promotion, primary care, community care and hospital care. Interventions focused on changing behaviours, at both a population and individual level, are recognised as important and are supported by a range of practical recommendations[6]. Nurses in all settings have the chance to give opportunistic advice and make recommendations for lifestyle changes, but those in primary care, for example practice nurses, are particularly well placed, given their access to the communities they serve and the increased time they spend with patients. Indeed, the government recognises the significant contribution that practice nurses can make in systematic risk assessment and empowering patients to improve their own health outcomes. The National Service Framework (NSF) has been an important driver for improved management and prevention of CVD[7]. Standard four focuses on the primary prevention of people at risk of CVD and states that GPs and primary health care teams should identify all people at significant risk and offer them appropriate advice and

treatment to reduce their risks. Health promotion strategies and interventions should be targeted by practice nurses and are explained below.

Lifestyle management

Weight loss

Overweight or obese individuals are more likely to have high blood pressure, high cholesterol levels and type 2 diabetes, all of which increase their risk of developing CVD. Therefore, maintaining a healthy body weight can significantly protect against CVD. Practice nurses should discuss strategies with at-risk individuals, focusing on the gradual reduction of weight through a combination of diet, exercise and behavioural changes. Waist circumference measurements should be less than 94cm in men (90cm in South Asian men) and less than 80cm in women (80cm in South Asian women). Body Mass Index (BMI) does not take into account body fat distribution, whereas waist measurement gives a better indication of the central distribution of excess adipose tissue and, therefore, is a more accurate reflection of overweight or obesity.

Dietary advice

Dietary advice can be given based on standard healthy eating guidelines provided by the British Nutrition Foundation[8], including the following:

- Aim to eat at least two portions of fish each week; at least one should be oily fish. Oily fish contains omega 3 fatty acids that protect the heart.
- Eat less saturated fat to keep blood cholesterol down. For example:
    - Choose lean cuts of meat and trim off any excess fat
    - Cut back on fats and oils high in saturates such as lard, ghee, butter, palm oil and coconut oil. Use oils that are high in unsaturated fat, such as rapeseed, olive and sunflower oils/spreads. Only use in small amounts as all oils are a concentrated source of calories
    - Choose semi-skimmed/skimmed milk and low or reduced fat dairy products
    - Grill rather than fry foods whenever possible
    - Pastry is high in fat so only eat pies and pastries occasionally
    - Opt for tomato-based sauces instead of those that are cream/cheese based
- Eat wholegrain and high-fibre products, such as wholegrain bread and breakfast cereals, brown rice and pasta. Foods such as oats and pulses contain soluble fibre which may help to reduce blood cholesterol levels.
- Choose food with lower levels of salt and do not add extra salt to cooking or at the table. Salt is the main source of sodium in the diet and a high intake is related to high blood pressure.
- Eat at least 5 portions of fruit and vegetables every day and try to include lots of different types.
- Read food labels carefully.

Plant stanols/sterols

Plant stanols and sterols are sourced from either wood pulp products or soya bean distillates, rapeseed and sunflower oils. They inhibit the absorption of cholesterol to the intestines and reductions of up to 14% in total cholesterol may be achieved[9]. When eaten regularly to provide about 2-2.5g per day, they can help to lower raised blood cholesterol levels, but the required intake must be maintained to achieve maximum efficiency and

effectiveness. Plant stanols and sterols are available in a variety of products, including spreads, yogurts, milk and cheese. NICE (National Institute for Clinical Excellence) guidelines on Lipid Modification[10] do not recommend plant sterols as a way of preventing first heart attacks. However, there is substantial evidence to show that both plant stanols and sterols do reduce cholesterol levels, lowering the risk of CVD.

Physical activity

Although people who are physically inactive are at increased risk of suffering from CVD, a large proportion of people do not take part in regular physical activity. At least 30 minutes of moderate activity on five or more days a week is recommended to protect against CVD. To aid weight loss this amount needs to be increased to 45-60 minutes every day. Moderate intensity aerobic activity refers to activity that makes the heart beat faster and causes an individual to be slightly out of breath. Some examples include fast walking, swimming, cycling, dancing and active housework and cleaning.

Smoking

Smoking is the single biggest cause of preventable death in the UK and giving up smoking is one of the most important actions a person can take to protect their heart. Giving up smoking will reduce CVD risk even if a person has smoked for many years. Therefore, it is essential that practice nurses are proactive and provide advice on smoking cessation. Key features of smoking cessation strategies include: asking about smoking at every opportunity; advising all smokers to stop; assisting smokers to stop and arranging follow-up.

Alcohol

Alcohol should be consumed in moderation (one to two units for women and two to three units for men per day). When taken in excess, alcohol can damage the cardiac muscle, cause stroke and contribute to obesity and high blood pressure.

Stress

Increased levels of stress over a prolonged period can contribute to high blood pressure and exacerbate problems in people who already have high blood pressure. The role of the practice nurse is to advise on relaxation techniques and provide instruction in breathing exercises to combat rising stress levels. Physical activity is also a key factor in alleviating stress.

Medication

Various types of medication are used to control and correct cholesterol levels, with statins being the most common form of drug therapy for reducing raised cholesterol, for example, simvastatin. They are often prescribed as first-line therapy after diet and other lifestyle changes. Statins significantly reduce the risk of CVD by lowering low-density lipoprotein (LDL) cholesterol and preventing the build-up of plaque in arteries. Other products available to lower cholesterol include nicotinic acid, fibrates, resins, omega-3 fish oils and ezetimibe.

Conclusion

Practice nurses within the primary care team can be champions for CVD prevention, given the important role they have to play in raising awareness of the risks of CVD, in particular

amongst those considered to be at high risk, and also, in assisting people to make the necessary lifestyle changes to minimise their risks.

Box 1

NSF Standard 4: People *without* diagnosed CHD or other occlusive arterial disease with a CHD risk greater than 30% over ten years

• advice about how to stop smoking including advice on the use of nicotine replacement therapy
• information about other modifiable risk factors and personalised advice about how they can be reduced (including advice about physical activity, diet, alcohol consumption, weight and diabetes)
• advice and treatment to maintain blood pressure below 140/85 mm Hg
• add statins to lower serum cholesterol concentrations EITHER to less than 5 mmol/l (LDL-C to below 3 mmol) OR by 30% (whichever is greater)
• meticulous control of blood pressure and glucose in people who also have diabetes

Primary care practices should put in place models of care so that they use a systematic approach for:
• identifying people at high risk of CHD
• identifying and recording of modifiable risk factors of people at high risk of CHD
• providing and documenting the delivery of appropriate advice and treatment and offering regular review to people at high risk of CHD

Box 2

For those people at high risk of CVD, practice nurses have an important role to play in providing advice and helping them to achieve lifestyle changes. Key recommendations to reduce the risk of CVD include:
• maintain a healthy body weight
• eat 5-A-Day
• eat oily fish
• eat wholegrain and high-fibre products
• eat less saturated fat
• reduce salt intake
• read food labels
• drink less alcohol
• give up smoking
• increase the amount of physical activity
• take steps to alleviate stress
• take plant stanols and sterols on a consistent basis
• take medication when prescribed

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